
UNIVERSITI SAINS MALAYSIA

First Semester Examination
Academic Session 2005/2006

November 2005

RMT 552 – Ekonomi dan Kewangan
(Construction Economics and Finance)

Masa: 3 jam
(Duration: 3 hours)

Sila pastikan bahawa kertas peperiksaan ini mengandungi **SEBELAS** muka surat yang tercetak sebelum anda memulakan peperiksaan ini.

*Please check that this examination paper consists of **ELEVEN** printed pages before you begin the examination.*

Pelajar dibenarkan menjawab semua soalan dalam Bahasa Inggeris ATAU Bahasa Malaysia sahaja.

Students are allowed to answer all questions either in English OR in Bahasa Malaysia only.

Jawab **EMPAT** soalan sahaja. Jawab **DUA** soalan dari **BAHAGIAN A** dan **DUA** soalan dari **BAHAGIAN B** ATAU **DUA** soalan dari **BAHAGIAN C**.

*Answer **FOUR** questions only. Answer **TWO** questions from **SECTION A** and **TWO** questions from **SECTION B** OR **TWO** questions from **SECTION C**.*

Sila asingkan buku jawapan untuk setiap Bahagian.

Please separate the answer book for each Section.-

BAHAGIAN A
SECTION A

1. Kenaikan harga bahanapi yang mencecah melebihi USD70/tong dijangka akan memberi kesan negatif kepada semua sektor ekonomi termasuk pembinaan. Pada pandangan anda, bagaimana dan sejauh manakah sektor pembinaan akan terjejas dengan kenaikan harga tersebut? Berikan contoh-contoh yang berkaitan untuk menjelaskan huraian anda.

The fuel price increase, which surpassed USD70/barrel, will negatively impact the whole economy including the construction industry. Explain, by giving specific examples, to illustrate how and to what extent will the fuel price increase affect the industry?

(25 markah/marks)

2. Pihak kerajaan bercadang untuk menangguhkan pelaksanaan kerja-kerja pembinaan baru untuk beberapa ketika akan datang. Langkah ini dijangka memberi kesan buruk kepada 64,000 firma pembinaan tempatan, khususnya yang bersaiz kecil dan sederhana, yang banyak bergantung kepada projek-projek baru kerajaan. Pada pandangan anda apakah langkah tersebut wajar? Apakah anda bersetuju dengannya? Berikan alasan mengapa anda bersetuju atau tidak bersetuju.

The government has decided to falter their demand for new construction works for a few years to come. This action is expected to have serious impact on the 64,000 construction firms within the country, in particular those smaller firm which are very much dependent on new public projects for survival. Is the action justified? Do you agree with it? Give reasons for your agreement or disagreement.

(25 markah/marks)

3. Pihak kerajaan merupakan klien terbesar bagi sektor pembinaan di Malaysia. Ini kerana permintaan dari pihak kerajaan khususnya untuk kerja-kerja pembinaan baru membentuk hampir 50% dari nilai keseluruhan permintaan bagi sektor pembinaan negara. Jika diandaikan pihak kerajaan tidak lagi melaksanakan projek-projek baru, persaingan akan tertumpu kepada permintaan projek baru dari pihak swasta serta lain-lain kerja pembinaan yang berkaitan. Dalam hal ini, firma perlu mengambil tindakan pro-aktif mencari peluang-peluang pasaran yang baru untuk mengekalkan kewujudannya. Sebagai Pengurus/Pemilik kemanakah halatuju firma anda? Apakah peluang-peluang lain dalam pasaran yang akan diterokai oleh firma anda dan berikan sebab mengapa anda memilihnya?

The government is the biggest client of the Malaysian construction sector. This is due to the fact that new public works contributed to about 50% of the aggregate demand on construction. Assuming that new public works is non-existente, competition for jobs will then be focused on new private works and other construction related demands. As an Owner/Manager of a firm, what will be the direction of your firm? What other opportunities or market sector will your firm be involved and why?

(25 markah/marks)

BAHAGIAN B : POLISI DAN ISU
SECTION B : POLICY AND ISSUES

1. Pasaran industri binaan untuk firma kontraktor yang menjalankan perniagaannya boleh dipecahkan kepada pasaran dalam dan luar negara. Banyak firma kontraktor di Malaysia yang telah beroperasi di luar negara dan begitu juga firma kontraktor luar yang memasuki pasaran Malaysia.

Pembinaan dalam ekonomi global dipengaruhi oleh beberapa faktor. Di antara faktor-faktor ini ialah globalisasi, pasaran yang kurang halangan kerana perjanjian GATT, pengurangan saiz pasaran dalam negara, kekurangan sumber manusia dalam negara, peningkatan aktiviti pembangunan dalam ekonomi yang sedang berkembang di negara membangun serta juga meningkatnya bilangan projek yang kompleks seperti telekomunikasi, infrastruktur, perbekalan tenaga dan juga sumber mineral.

Jelaskan faktor-faktor di atas yang pada pandangan anda akan menjadi pendorong kepada firma kontraktor untuk beroperasi diluar negara. Penjelasan anda haruslah menunjukkan kefahaman anda berkenaan dengan faktor-faktor ini dan bagaimana setiap daripadanya dapat mendorong firma kontraktor melewati pasaran luar negara. Anda bolehlah menjelaskan hanya **SATU (1)** faktor atau pun maksimum **TIGA (3)** faktor sahaja yang boleh menunjukkan pemahaman anda tentang perkara tersebut.

The construction industry markets for a contractor operating or conducting their business can be segmented to local and international markets. Many construction firms in Malaysia have already ventured overseas and many foreign contractors have entered the Malaysian markets.

Construction in a global economy is influenced by a number of factors. Some of these factors includes globalization, de-regulation of market through GATT agreements, reduction in the size of the market locally, lack of manpower resources in a particular country, increase in development in emerging economies and developing countries, increase in sophistication of complex projects, especially infrastructure, telecommunications, water supply, power and mineral resources.

*Explain the above factors or other that you presumed to be the main factors as to why a construction firm needs to venture overseas. Your explanation should reflect your understanding of the factors and how each may motivate or encourage the firm to venture abroad. You may choose to explain **One (1)** factor in depth or maximum of **Three (3)** factors which will enable to show your understanding on the subject matter.*

(25 markah/marks)

2. *Pembangunan lestari hanya mungkin dapat dicapai sekiranya projek pembinaan di reka bentuk dan dibina dengan kelestarian masa hadapan menjadi faktor yang dominan dalam mengimplementasikan projek. Salah satu masalah dalam mengimplementasikan projek pembinaan yang lestari ialah menseimbangkan faktor ekonomi, sosial dan persekitaran; tunggak kepada pembangunan lestari dan keperluan pembangunan fizikal sesebuah negara.*

Sebagai ahli ekonomi pembinaan, nasihatkan klien anda tentang cadangan projek pembangunannya dengan mengambilkira faktor yang perlu diberi perhatian dalam melaksanakan projeknya yang akan memberikan kesan kepada persekitaran. Projeknya ialah projek pembinaan kilang yang akan mengeluarkan bahan-bahan buangan/sampingan yang berbahaya kepada persekitaran.

Sustainable development may only be achieved if construction projects are designed and constructed with sustainability of the future being the predominant factors being considered in project implementation. One of the main problems in implementing sustainable construction project is balancing of the economics, social and environmental factors; the pillars of sustainable development and the need for physical development of a country.

As a construction economist, advice your client on the proposed development project with regards to factors that need to be considered when implementing his projects, which may be detrimental to the environment. The project is the construction of the factory that discharges environmentally hazardous materials to the environment.

(25 markah/marks)

...5/-

3. Organisasi antarabangsa dan transnasional boleh mempengaruhi industri pembinaan sama ada secara langsung atau tidak langsung. Di antara organisasi yang terkenal ialah Bangsa-Bangsa Bersatu dan semua agensinya, Kesatuan Eropah, organisasi ekonomi antarabangsa seperti WTO, IMF/Bank Dunia dan ILO.

Jawab sama ada:

- (a) Tanpa merujuk kepada mana-mana organisasi tersebut, jelaskan bagaimana organisasi ini dapat mempengaruhi industri pembinaan sama ada secara langsung atau tidak langsung. Pada pendapat anda adakah industri pembinaan tempatan perlu mengambil pengaruhnya sebagai ancaman yang serius? Berikan penjelasan.

Atau

- (b) Pilih mana-mana organisasi antarabangsa dan jelaskan fungsi dan pengaruhnya khususnya kepada industri binaan dan kepada Negara amnya.

The international and transnational organizations can influence the construction industry either directly or indirectly. Among, the notable international organizations known to playing these roles are The United Nations and its agencies, The European Union, international economic organizations such as WTO, IMF/World Bank and International Labour Organization (ILO)

Answer Either

- (a) *Without referring to any particular organizations, explain how the international organizations can influence the construction industry either directly or indirectly. In your opinion should the construction industry consider their influence as serious threats? Elaborate on your opinion.*

Or

- (b) *Choose one of the international organizations and explain roles and their perceived influence to the construction industry in particular or to the nation in general.*

(25 markah/marks)

BAHAGIAN C
SECTION C

4. (a) Di dalam ruang 1, nyatakan sama ada ianya Aset Semasa (CA), Liabiliti Semasa (CL), Perbelanjaan (E), Aset Tetap (FA), Pinjaman Jangka Panjang (LTD), Pendapatan (R), atau Equiti Pemilik Saham (SE).

In Column (1), indicate whether the account is a current Asset (CA), current liability (CL), expense (E), fixed asset (FA), Long-term debt (LTD), revenue (R), or stockholders' equity (SE).

| | Account name | (1) Type of account |
|----|----------------------------------|------------------------|
| 1 | Buildings | |
| 2 | Accruals | |
| 3 | Administrative expenses | |
| 4 | Cost of goods sold | |
| 5 | Machinery | |
| 6 | Common stock (at par) | |
| 7 | Sales revenue | |
| 8 | Selling expense | |
| 9 | Marketable securities | |
| 10 | Inventories | |
| 11 | Cash | |
| 12 | Notes payable | |
| 13 | Long-term debts | |
| 14 | Preferred stock dividends | |
| 15 | Paid-in capital in excess of par | |

(15 markah/marks)

- 7 -

- (b) Analisis Marginal dan Matlamat Firma – Ahmad seorang penganalisa kewangan bagi Intel Sdn. Bhd diminta untuk mengkaji satu kertas cadangan (proposal). Pengurus Bahagian Otomotif percaya penggantian mesin robotik kepada “gear line” akan membawa peningkatan jumlah manfaat (total benefits) sebanyak \$600,000 (dalam ringgit hari ini) bagi 5 tahun ke hadapan. Mesin robotik yang sedia ada akan membawa jumlah manfaat \$450,000 (juga dalam ringgit hari ini) bagi masa yang sama. Pelaburan modal sebanyak \$250,000 diperlukan bagi pemasangan alat mesin baru itu. Pengurus berkenaan menganggarkan mesin yang sediaada dapat dijual pada harga \$ 80,000. Dengan menggunakan keadah marginal jelaskan bagaimanakah Ahmad dapat menentukan perkara-perkara berikut:-

- i. “Marginal (added) benefits” bagi cadangan mesin robotik baru itu.
- ii. “Marginal (added) kos ke atas cadangan mesin robotik baru itu.
- iii. Jumlah keuntungan bersih ke atas cadangan mesin robotik baru itu.
- iv. Apakah cadangan Ahmad kepada syarikat untuk tindakan selanjutnya? Kenapa?
- v. Apakah cadangan lain selain fakta kos dan manfaat (benefits) yang perlu diberi perhatian sebelum keputusan akhir dibuat.

Marginal analysis and the goal of the firm – Ahmad, capital budgeting analyst for Intel Sdn. Bhd., has been asked to evaluate a proposal. The manager of the automotive division believes that replacing the robotics used on the gear line will produce total benefits of \$600,000 (in today's dollar) over the next 5 years. The existing robotics would produce benefits of \$450,000 (also in today's dollars) over the same time period. An initial cash investment of \$250,000 would be required to install the new equipment. The manager estimates that the existing robotics can sold for \$80,000. Show how Ahmad will apply marginal techniques to determine the following:

- a. The marginal (added) benefits of the proposed new robotics.
- b. The marginal (added) cost of the proposed new robotics.
- c. The net benefit of the proposed new robotics.
- d. What should Ahmad recommend that the company do? Why?
- e. What factors besides the costs and benefits should be considered before the final decision is made.

(10 markah/marks)

...8/-

- 8 -

- 5 (a) Kini terdapat tiga jenis organisasi perniagaan di dalam pasaran hari ini. Nyatakan dan terangkan jenis-jenis tersebut juga jelaskan kekuatan dan kelemahan bagi ketiga-tiga organisasi perniagaan berkenaan.

There are three most common legal forms of business organization in the market today. Briefly name and describe the strengths and weaknesses of these three common legal forms of business organization.

(15 markah/marks)

- (b) Seperti yang tercatat di dalam "Balance Sheet" Syarikat Bartlett pada Jadual 1, jawab soalan berikut:

- i. Jumlah Aset Semasa nilai (2003) daripada "Balance Sheet" Syarikat Bartlett.
- ii. Jumlah bersih Aset Tetap (2003) daripada "Balance Sheet" Syarikat Bartlett.
- iii. Jumlah Liabiliti Semasa nilai (2003) daripada "Balance Sheet" Syarikat Bartlett.
- iv. Jumlah Liabiliti nilai (2003) daripada "Balance Sheet" Syarikat Bartlett.
- v. Jumlah Equiti Saham (2003) daripada "Balance Sheet" Syarikat Bartlett.

As the Balance Sheets of the Bartlett Company shown in Table 1 above, calculate the following:

- i. *The total current assets value (2003) from the Bartlett Company Balance Sheets.*
- ii. *The total net fixed assets value (2003) from the Bartlett Company Balance Sheets.*
- ii. *The total current liabilities value (2003) from the Bartlett Company Balance Sheets.*
- iv. *The total liabilities value (2003) from the Bartlett Company Balance Sheets.*
- v. *The total stockholder's equity (2003) from the Bartlett Company Balance Sheets.*

- 9 -

Table 1 BARLETT COMPANY BALANCE SHEET(\$000)

| | DECEMBER 31 | |
|---|--------------------|---------------------|
| | 2003 | 2002 |
| Cash | \$ 25,000 | \$ 24,100 |
| Accounts receivable | 805,556 | 763,900 |
| Inventories | 700,625 | 763,445 |
| Land and buildings | 2,093,819 | 1,691,707 |
| Less: Accumulated depreciation | 500,000 | 348,000 |
| Total Assets | <u>3,125,000</u> | <u>2,895,152</u> |
| Account payable | \$ 230,000 | \$ 400,500 |
| Notes payable | 311,000 | 370,000 |
| Accruals | 75,000 | 100,902 |
| Long term debt | 1,165,250 | 700,000 |
| Preferred stock (2,500 shares, \$1.20 dividend) | 50,000 | 50,000 |
| Common stock (100,000 shares at \$4 par) | 400,000 | 400,000 |
| Paid in capital in excess of par value | 593,750 | 593,750 |
| Retained earnings | 300,000 | 280,000 |
| Total liabilities and stockholders' equity | <u>\$3,125,000</u> | <u>\$ 2,895,152</u> |

(10 markah/marks)

6. Gunakan penyata kewangan yang diberikan pada Jadual 2, buat penganalisaan prestasi kedudukan kewangan bagi Syarikat Bartlett berdasarkan kepada (1) Kecairan, (2) Aktibiti, (3) pinjaman, (4) keuntungan dan juga melihat kepada kedudukan keseluruhan pada keadaan kewangan syarikat.

Use the preceding financial statements given in Table 2 analyze the Bartlett Company financial condition as it related to (1) liquidity, (2) activity, (3) debt, (4) profitability and summarize the company's overall financial condition.

TABLE 2 - BARLETT COMPANY INCOME STATEMENTS(\$000)

| | <u>For Years ended December 31</u> | |
|--|------------------------------------|--------------|
| | 2003 | 2002 |
| Sales revenue | \$ 3,074 | \$ 2,567 |
| Less: Cost of goods sold | <u>2,088</u> | <u>1,711</u> |
| Gross profits | \$ 986 | \$ 856 |
| Less: Operating expenses | | |
| Selling expense | \$ 100 | \$ 108 |
| General and administrative expenses | 194 | 187 |
| Lease expense | 35 | 35 |
| Depreciation expense | <u>239</u> | <u>223</u> |
| Total operating expense | \$ 568 | \$ 553 |
| Operating profits | \$ 418 | \$ 303 |
| Less: Interest expense | <u>93</u> | <u>91</u> |
| Net profit before taxes | \$ 325 | \$ 212 |
| Less: taxes(rate = 29%) | <u>94</u> | <u>64</u> |
| Net profits after taxes | \$ 321 | \$ 148 |
| Less:preferred stock dividends | <u>10</u> | <u>10</u> |
| Earnings available for common stockholders | \$ 221 | \$ 138 |
| Earnings per share (EPS) | \$ 2.90 | \$ 1.81 |
| Dividend per share(DPS) | \$ 1.29 | \$ 0.75 |

The 29% tax rate for 2003 results because the firm has certain special tax write offs that not show up directly on its income statement.

BARLETT COMPANY BALANCES SHEET (\$000)

| Assets | DECEMBER 31 | |
|---|-----------------|-----------------|
| | 2003 | 2002 |
| Current assets | | |
| Cash | \$ 363 | \$ 288 |
| Marketable securities | 68 | 51 |
| Accounts receivable | 503 | 365 |
| Inventories | 289 | 300 |
| Total current assets | <u>\$ 1,223</u> | <u>\$ 1,004</u> |
| Gross fixed assets(at cost) | | |
| Land and buildings | \$ 2,072 | \$ 1,903 |
| Machinery and equipment | 1,866 | 1,693 |
| Furniture and fixtures | 358 | 316 |
| Vehicles | 275 | 314 |
| Other (includes financial leases) | 98 | 96 |
| Total gross fixed assets(at cost) | <u>\$ 4,669</u> | <u>\$ 4,322</u> |
| Less: Accumulated depreciation | 2,295 | 2,056 |
| Net fixed assets | <u>\$ 2,374</u> | <u>\$ 2,266</u> |
| Total assets | <u>\$ 3,597</u> | <u>\$ 3,270</u> |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities | | |
| Account payable | \$ 382 | \$ 270 |
| Notes payable | 79 | 99 |
| Accruals | 159 | 114 |
| Total current liabilities | <u>\$ 620</u> | <u>\$ 483</u> |
| Long term debt(includes financial leases) | <u>\$ 1,023</u> | <u>\$ 967</u> |
| Total liabilities | <u>\$ 1,643</u> | <u>\$ 1,450</u> |
| Stockholder's equity | | |
| Preferred stock- cumulative 55, \$100 par, 2,00 shares authorized and issued | 200 | 200 |
| Common stock-\$2.50 par, 100,00 shares authorized, shares issued and outstanding in 2003: 76,262; in 2002; 76,244 | 191 | 190 |
| Paid in capital in excess of par on common stock | 428 | 418 |
| Retained earnings | 1,135 | 1,012 |
| Total stockholders' equity | <u>\$ 1,954</u> | <u>\$ 1,820</u> |
| Total liabilities and stockholders' equity | <u>\$3,597</u> | <u>\$ 3,270</u> |

(25 markah /marks)